umber: 09,854,731	Edited by:
Changed a file from non-ASCII to ASCII	Verified by: (STIC
Changed the margins in cases where the sequ	ence text was "wrapped" down to the next line.
Edited a format error in the Current Application	Data section, specifical ENTERED
Edited the Current Application Data section wit applicant was  the prior application data; or	h the actual current number. The number inputted by the other
Added the mandatory heading and subheading	s for *Current Application Data*.
Edited the "Number of Sequences" field. The a	applicant spelled out a number instead of using an integer.
Changed the spelling of a mandatory field (the	headings or subheadings), specifically:
•	rrect. The sequence numbers that were edited were:
nserted or corrected a nucleic number at the er	nd of a nucleic line. SEQ ID NO's edited:
Corrected subheading placement. All response pplicant placed a response below the subhead	es must be on the same line as each subheading. If the fing, this was moved to its appropriate place.
nserted colons after headings/subheadings. H	leadings edited included:
Deleted extra, inválid, headings used by an app	olicant, specifically:
Deleted: non-ASCII "garbage" at the begind	ning/end of files; secretary initials/filename at end of fi
Inserted mandatory headings, specifically:	
Corrected an obvious error in the response, sp	ecifically:
Edited identifiers where upper case is used but	lower case is required, or vice versa.
Corrected an error in the Number of Sequence:	s field, specifically:
· A "Hard Page Break" code was inserted by the	applicant. All occurrences had to be deleted.
	ences and adjusted the "(A)Length:" field accordingly (error
Other:	

Action. DO NOT send a copy of this form.

3/1/95

DATE: 06/12/2001

TIME: 11:45:16

OIPE

```
Input Set : A:\Cpg.pto
                     Output Set: N:\CRF3\06112001\I854731.raw
                                                                       See P.5
      3 <110> APPLICANT: Allen, Steve
              Lee, Jian Ming
      6 <120> TITLE OF INVENTION: Plant Protein Kinases
      8 <130> FILE REFERENCE: BB-1171
C--> 10 <140> CURRENT APPLICATION NUMBER: US/09/854,731
C--> 11 <141> CURRENT FILING DATE: 2001-05-14
     13 <150> PRIOR APPLICATION NUMBER: 60/092,438
W--> 14 <151> PRIOR FILING DATE: July 10, 1998
     16 <160> NUMBER OF SEQ ID NOS: 23
     18 <170> SOFTWARE: Microsoft Office 97
     20 <210> SEQ ID NO: 1
     21 <211> LENGTH: 484
     22 <212> TYPE: DNA
     23 <213> ORGANISM: Zea mays
     25 <220> FEATURE:
     26 <221> NAME/KEY: unsure >
     27 <222> LOCATION: (389)
     29 <220> FEATURE:
     30 <221> NAME/KEY: unsure
     31 <222> LOCATION: (396)
     33 <220> FEATURE:
     34 <221> NAME/KEY: unsure
     35 <222> LOCATION: (402)
     37 <220> FEATURE:
     38 <221> NAME/KEY: unsure
     39 <222> LOCATION: (430)
     41 <220> FEATURE:
     42 <221> NAME/KEY: unsure
     43 <222> LOCATION: (467)
     45 <220> FEATURE:
     46 <221> NAME/KEY: unsure/
     47 <222> LOCATION: (469)
     49 <220> FEATURE:
     50 <221> NAME/KEY: unsure /
     51 <222> LOCATION: (479)
     53 <400> SEQUENCE: 1
     54 gccagececa getecagece caactegtet geegaggege tgeeeaceag geegegteee
     55 aaggegeege eggtgaageg egtgteeage geegggetge tggteggete ggtgeteaag 120
     56 cgcaggacgg agaacettaa ggacaagtac ageetgggge ggegeetegg geagggeeag 180
     57 ttcggcacca cgtacctgtg cgtggagcgg gccacgggca aggagttcgc gtgcaagtcc 240
     58 atcctgaage geaactegte acegaegaeg aegtggagga egteegeegg gagateeaga 300
     59 taatgcacca cctggcgggc caccccaacg tgatctccat ccgcggcgcc tacgaggacg 360
W--> 60 ccgtcgccgt gacctcgtca tggactctng gcggcngcga antgttcaag gatgtgcaga 420
W--> 61 agggcactan acgagagaag gccgcgagct cgcaggtatg tcgcgththa ggcgtgcant 480
     62 catq
     64 <210> SEQ ID NO: 2
     65 <211> LENGTH: 101
```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/854,731

RAW SEQUENCE LISTING DATE: 06/12/2001 PATENT APPLICATION: US/09/854,731 TIME: 11:45:16

Input Set : A:\Cpg.pto

Output Set: N:\CRF3\06112001\I854731.raw

```
66 <212> TYPE: PRT
     67 <213> ORGANISM: Zea mays
     69 <220> FEATURE:
     70 <221> NAME/KEY: UNSURE
     71 <222> LOCATION: (62)
     73 <400> SEQUENCE: 2
    74 Pro Pro Val Lys Arg Val Ser Ser Ala Gly Leu Leu Val Gly Ser Val
                                            10
     77 Leu Lys Arg Arg Thr Glu Asn Leu Lys Asp Lys Tyr Ser Leu Gly Arg
     78
                    20
                                        25
     80 Arg Leu Gly Gln Gly Gln Phe Gly Thr Thr Tyr Leu Cys Val Glu Arg
                35
W--> 83 Ala Thr Gly Lys Glu Phe Ala Cys Lys Ser Ile Leu Lys Xaa Leu Val
            50
                                55
     86 Thr Asp Asp Asp Val Glu Asp Val Arg Arg Glu Ile Gln Ile Met His
     89 His Leu Ala Gly His Pro Asn Val Ile Ser Ile Arg Gly Ala Tyr Glu
                        85
                                            90
     92 Asp Ala Val Ala Val
     93
                   100
    95 <210> SEQ ID NO: 3
     96 <211> LENGTH: 2374
     97 <212> TYPE: DNA
     98 <213> ORGANISM: Oryza sativa
     100 <400> SEQUENCE: 3
     120
    102 acgagegact egectecace tectegacet ecacetegeg aggeggeggt geggggggee
                                                                           180
    103 ccaaacccta accctaattc cgctgcgccc gcgcccgcgc ccgcgcgcgc cgacaggctg
                                                                           240
    104 ttgttgttgt tgccatgggg cagtgctacg gcaagggcgc gtcggggagg acggcggacg
    105 atgagggcgg ggtggtgacg gagcaccagt cgccgccgcc ggcgaacggg ctgccgtcga
                                                                           300
    106 cgccgccgcg gcagcaggcg caggcgcagg cgcagcaggt ggggacgccg aggcggcgtg
    107 ggagtaagtc cggatcgacg acgccggggc accagacgcc tggggtggcg tggccgagcc
                                                                           420
    108 cgtacccgtc cgggggcgcg agcccgctgc cggccggggt gtcgccgtcg ccggcgaggt
                                                                           480
    109 cgacgcccag gaggttcttc aagcggccgt tcccgccgcc gtcgccggcc aagcacataa
                                                                           540
                                                                           600
    110 aggccacqct cqccaaqaqq ctqqqtgggg ggaagcccaa ggaagggacg ataccggagg
                                                                           660
    111 aqqqaqqcqt qqqcqctqqc qqcqqcqqtq gaggggccgc ggatggggcg gagacggaga
                                                                           720
    112 ggccattgga caagacgttc gggttctcga agaacttcgg cgcgaagtac gagctcggga
    113 aggaggtggg gaggggccac ttcggacaca cttgctccgc cgtcgtcaag aagggcgagt
    114 acaaqqqaca qaccqtcqcc qtcaagatca tcgccaaagc taagatgaca acggcaatat
    115 ccattgagga tgttcgtaga gaagtaaaaa ttttgagagc gttatcaggg cacaataatc
    116 tcgtcaaatt ctatgatgca tgtgaggatg gcctcaatgt ctacattgtc atggaattat
    117 gtgagggagg agaattgcta gacagaatat tagccagagg cgggagatac acagaggaag 1020
    118 atgccaaagc gattgttgta cagattttga gcgtagtagc cttctgtcat cttcaggggg 1080
    119 tagtgcatcg tgatttgaag ccagagaatt tccttttcac aaccagggat gaaaatgctc 1140
    120 ccatgaagtt gattgatttt ggtctctctg atttcattag accagatgaa aggcttaatg 1200
    121 atattgttgg aagtgcatat tatgttgccc cagaggtttt acacagatca tatagtatgg 1260
    122 aagcagacat ttggagtata ggtgtcataa cgtacattct gctctgtggc agtcggccat 1320
    123 totgggcacg aacagaatca ggaatattoc gatotgtgtt gagagotgat occaactttg 1380
    124 atgattcacc gtggcctaca gtatcagctg aagctaagga ttttgtgaag agatttctga 1440
```

RAW SEQUENCE LISTING DATE: 06/12/2001 PATENT APPLICATION: US/09/854,731 TIME: 11:45:16

Input Set : A:\Cpg.pto

Output Set: N:\CRF3\06112001\1854731.raw

```
125 acaaaqatta ccgcaaaaqa atqaccgctg ttcaagcact gactcatcct tggttgcgag 1500
126 atgaacaaag gcagatcccg ctggacatac tcatcttcag attaattaag caatacctcc 1560
127 gcqctacacc tcttaaacgg ttggcattaa aggcactatc caaggcttta agggaagatg 1620
128 aacttttgta tctcaaactg cagtttaaac tgctcgaacc tagagatggg tttgtatcac 1680
129 ttqacaactt tcgqacqqca ctaacqcqat atttaactga tqctatqaaq qaatcgaggg 1740
.130 ttcttgaatt tttgcatgcg ttggaaccac ttgcatacag aagaatggac tttgaagagt 1800
131 tetgtgcege ageaateagt cettaceage ttgaggcact ggaaaggtgg gaggagattg 1860
132 ctggaacagc tttccagcaa tttgaacaag agggcaaccg agtcatatca gttgaggaat 1920
133 tagcacagga attaaatctt gctccaactc attactccat cgttcaagac tggatcagaa 1980
134 aatccgatgg caagctaaac tttctcgggt ttaccaaatt tttacatggt gtcacaataa 2040
135 ggggctcaaa tacaagacgg cattaagcga tttgcaaaag aaaatgtatt cttttctctt 2100
136 ctaattttaa agccgctcat tatgtgaccc tgattgatgt tttcccctcc tgctcctatc 2160
137 cctctggtca atatgatcat tattcttgtt cgtgctgctg tcggctgttg tcatcatagt 2220
138 tttttgtaga gaatacatgt aaagatcttt tgtaatgaat cgaatgatat gtttgttcaa 2280
2374
140 gaggggggc cgtaccacat ccccccctc agcg
142 <210> SEQ ID NO: 4
143 <211> LENGTH: 623
144 <212> TYPE: PRT
145 <213> ORGANISM: Oryza sativa
147 <400> SEQUENCE: 4
148 Met Gly Gln Cys Tyr Gly Lys Gly Ala Ser Gly Arg Thr Ala Asp Asp
149
151 Glu Gly Gly Val Val Thr Glu His Gln Ser Pro Pro Pro Ala Asn Gly
                                    25
152
                20
154 Leu Pro Ser Thr Pro Pro Arg Gln Gln Ala Gln Ala Gln Ala Gln Gln
155
             35
157 Val Gly Thr Pro Arg Arg Gly Ser Lys Ser Gly Ser Thr Thr Pro
                            55
160 Gly His Gln Thr Pro Gly Val Ala Trp Pro Ser Pro Tyr Pro Ser Gly
                        70
161
163 Gly Ala Ser Pro Leu Pro Ala Gly Val Ser Pro Ser Pro Ala Arg Ser
                                        90
                    85
166 Thr Pro Arg Arg Phe Phe Lys Arg Pro Phe Pro Pro Pro Ser Pro Ala
                                   105
167 .
               100
169 Lys His Ile Lys Ala Thr Leu Ala Lys Arg Leu Gly Gly Lys Pro
                               120
           115
172 Lys Glu Gly Thr Ile Pro Glu Glu Gly Gly Val Gly Ala Gly Gly Gly
                                               140
173
                           135
175 Gly Gly Gly Ala Ala Asp Gly Ala Glu Thr Glu Arg Pro Leu Asp Lys
176 145
                       150
                                           155
178 Thr Phe Gly Phe Ser Lys Asn Phe Gly Ala Lys Tyr Glu Leu Gly Lys
                   165
                                       170
181 Glu Val Gly Arg Gly His Phe Gly His Thr Cys Ser Ala Val Lys
                                   185
182
               180
184 Lys Gly Glu Tyr Lys Gly Gln Thr Val Ala Val Lys Ile Ile Ala Lys
                               200
                                                  .205
185
           195
187 Ala Lys Met Thr Thr Ala Ile Ser Ile Glu Asp Val Arg Arg Glu Val
                                               220
                           215
188
       210
```

RAW SEQUENCE LISTING DATE: 06/12/2001 PATENT APPLICATION: US/09/854,731 TIME: 11:45:16

Input Set : A:\Cpg.pto

Output Set: N:\CRF3\06112001\1854731.raw

	0 Lys 1 225	Ile	Leu	Arg	Ala	Leu 230	Ser	Gly	His	Asn	Asn 235	Leu	Val	Lys	Phe	Tyr 240
	3 Asp	Ala	Cys	Glu	Asp 245	Gly	Leu	Asn	Val	Tyr 250	Ile	Val	Met	Glu	Leu 255	Cys
19 19	6 Glu 7	Gly	Gly	Glu 260	Leu	Leu	Asp	Arg	Ile 265	Leu	Ala	Arg	Gly	Gly 270	Arg	Tyr
19 20	9 Thr 0	Glu	Glu 275	Asp	Ala	Lys	Ala	Ile 280	Val	Val	Gln	Ile	Leu 285	Ser	Val	Val
20		290	_				295				_	300				
	5 Asn 6 305	Phe	Leu	Phe	Thr	Thr 310	Arg	Asp	Glu	Asn	Ala 315	Pro	Met	Lys	Leu	Ile 320
20			-		325	_			_	330	_				335	
21				340					345					350		
21			355					360					365			
21		370	_				375					380				
22	0 Phe 1 385	-				390					395					400
22					405					410					415	
22		_		420					425					430		
23			435	_				440	•				445			
23		450					455					460				
23	5 Leu 6 465	_				470					475					480
23	-				485			,		490					495	
24				500					505				•	510		,
24			515					520					525			
24		530		_			535					540				
25	0 Gln 1 545					550					555					560
25					565		_			570					575	
25				580					585					590		
26			595					600					605			пур
26	2 Phe	Leu	His	GLY	vai	Tnr	тте	Arg	GTÀ	ser	Asn	ınr	Arg	Arg	итѕ	

DATE: 06/12/2001

TIME: 11:45:16

```
Input Set : A:\Cpg.pto
                     Output Set: N:\CRF3\06112001\I854731.raw
                                  615
                                                      620
     263
             610
     265 <210> SEQ ID NO: 5
     266 <211> LENGTH: 568
     267 <212> TYPE: DNA
     268 <213> ORGANISM: Glycine max
     270 <220> FEATURE:
     271 <221> NAME/KEY: unsure /
     272 <222> LOCATION: (11)
     274 <220> FEATURE:
     275 <221> NAME/KEY: unsure
     276 <222> LOCATION: (69)
     278 <220> FEATURE:
     279 <221> NAME/KEY: unsure
     280 <222> LOCATION: (83)
     282 <220> FEATURE:
     283 <221> NAME/KEY: unsure/
     284 <222> LOCATION: (95)
     286 <220> FEATURE:
     287 <221> NAME/KEY: unsure/
     288 <222> LOCATION: (148)
     290 <220> FEATURE:
     291 <221> NAME/KEY: unsure /
     292 <222> LOCATION: (196)
     294 <220> FEATURE:
     295 <221> NAME/KEY: unsure/
     296 <222> LOCATION: (272)
     298 <220> FEATURE:
     299 <221> NAME/KEY: unsure /
     300 <222> LOCATION: (557)
     302 <220> FEATURE:
     303 <221> NAME/KEY: unsure /
     304 <222> LOCATION: (563)
     306 <220> FEATURE:
     307 <221> NAME/KEY: unsure /
     308 <222> LOCATION: (568)
     310 <400> SEQUENCE: 5
W--> 311 aaacccaagc ncccttccca gctggttcaa aaactcccct tcctcaaact caaaccctag 60
W--> 312 cagoqtcant caacaccett gengatette aageneeest teesteegee eteteeggee 120
W--> 313 aagcacatte gegegetget egecegenge caeggtteeg teaagcegaa egaagcetee 180
W--> 314 ataccggagg ccagcnagtg tgagctcggc ctcgacaaga gctttggctt tgctaagcag 240
W--> 315 ttttcggctc attatgagct cagtgacgaa gńgggccggg ggcattttgg gtatacctgc 300
     316 tccgctaaag gcaagaaagg ggcgttcaag ggcttaaatg ttgctgtcaa agtcattcct 360
     317 aaagccaaga tgaccacagc aattgctata gaggatgtaa ggagagaagt gaagatattg 420
     318 agggetttaa caggacataa gaatetggtg caattetatg aageetatga agatgatgae 480
     319 atgtttatat agtttggagt tgtgcaagga gggggaattg ctagatagga ttctttccgg 540
W--> 320 ggtggaaagt acctcgnaga ggntgccn
     322 <210> SEQ ID NO: 6
     323 <211> LENGTH: 157
     324 <212> TYPE: PRT
```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/854,731



## <u>Please Note:</u>

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

## VERIFICATION SUMMARY

PATENT APPLICATION: US/09/854,731 TIME: 11:45:17

DATE: 06/12/2001

Input Set : A:\Cpg.pto

Output Set: N:\CRF3\06112001\1854731.raw

```
L:10 M:270 C: Current Application Number differs, Replaced Application Number
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:14 M:256 W: Invalid Numeric Header Field, Wrong Prior FILING DATE:YYYY-MM-DD
L:60 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:1
L:60 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:61 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:1
L:61 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:83 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:2
L:83 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:311 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:5
L:311 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5
L:312 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:5
L:312 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5
L:313 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:5
L:313 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5
L:314 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:5
L:314 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5
L:315 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:5
L:315 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5
L:320 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:5
L:320 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5
L:356 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:6
L:356 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6
L:359 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:6
L:359 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6
L:362 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:6
L:362 M:341 W: (46) "n" or "Xaa" used, for SEQ ID\#:6
L:365 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:6
L:365 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6
L:371 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:6
L:371 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6
L:404 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:7
L:404 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7
L:435 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:8
L:435 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:438 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:8
L:438 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:629 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:11
L:629 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11
L:632 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:11
L:632 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11
L:634 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:11
L:634 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11
L:635 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:11
L:635 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11
L:637 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:11
L:637 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11
L:690 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:12
```

## VERIFICATION SUMMARY

PATENT APPLICATION: US/09/854,731

DATE: 06/12/2001 TIME: 11:45:17

Input Set : A:\Cpg.pto

Output Set: N:\CRF3\06112001\I854731.raw

L:690 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 L:696 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:12 L:696 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12L:699 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:12 L:699 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 L:702 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:12 L:702 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 L:708 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:12 L:708 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 L:765 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:13 L:765 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 L:766 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:13 L:766 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 L:767 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:13 L:767 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 L:768 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:13 L:768 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 L:852 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:14 L:852 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 L:887 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:15 L:887 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15